

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A recording apparatus for recording video data to a rewritable optical disc, ~~said recording apparatus~~ comprising:

encoding means for encoding the video data ~~corresponding to in accordance with~~ a compression-encoding process;

converting means for converting ~~the~~ a data structure of the encoded video data received from said encoding means into a file structure that allows a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware; and

recording means for recording ~~the~~ data having ~~the~~ said file structure to ~~an~~ the optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit~~;

wherein a plurality of ~~the~~ second data units ~~is~~ are matched with a successive record length of ~~which data is written to the optical disc; and~~

wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

2. (Currently Amended) A recording apparatus for recording audio data to a rewritable optical disc, ~~said recording apparatus~~ comprising:

~~encoding means for encoding the audio data in accordance with a compression-encoding process;~~

converting means for converting ~~the~~ a data structure of audio data or encoded audio data into a file structure that allows a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware; and

recording means for recording ~~the~~ data having the ~~said~~ file structure to an ~~the~~ optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit;~~

wherein a plurality of ~~the~~ second data units ~~is are~~ matched with a successive record length ~~of which data is written to the optical disc; and~~

~~wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.~~

3. (Currently Amended) A recording apparatus for recording video data and audio data to a rewritable optical disc, ~~said recording apparatus~~ comprising:

video encoding means for encoding ~~the~~ video data ~~corresponding to in accordance with~~ a compression-encoding process in a combination of an inter-frame predictive encoding process and a motion compensating process that allow a plurality of frames ~~are to be~~ structured as a group;

audio output means for outputting ~~the~~ audio data that has been ~~compression=~~

~~encoded or non-compressed either encoded or not encoded;~~

multiplexing means for converting ~~the a~~ a data structure of the encoded video data received from said encoding means and ~~the a~~ a data structure of the audio data received from said audio output means into respective file structures that allow a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware and for multiplexing the encoded video data and the audio data; and

recording means for recording the multiplexed data to ~~an~~ the optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit;~~

wherein a plurality of ~~the~~ second data units ~~is are~~ matched with a successive record length ~~of which data is written to the optical disc; and~~

wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

4. (Currently Amended) The recording apparatus as set forth in claim 3, wherein in the multiplexed data, ~~the a~~ a duration of the encoded video data of the second data unit is almost equal to ~~the a~~ a duration of the audio data of the second data unit.

5. (Original) The recording apparatus as set forth in claim 3, wherein in the multiplexed data, the encoded video data of the second data unit and audio data of the second data unit are alternately arranged, and wherein a plurality of sets of the encoded video data of the second data unit and the audio data of the second data unit are matched with the successive record length.

6. (Currently Amended) The recording apparatus as set forth in claim 2,
wherein the audio data is compression-encoded ~~corresponding to ATRAC~~, in
accordance with a Adaptive Transform Acoustic Coding method (ATRAC); and
wherein the first data unit of the file structure contains one or ~~a plurality of more~~
sound units.

7. (Currently Amended) The recording apparatus as set forth in claim 1,
wherein the file structure further includes a data portion that ~~describes~~ includes
management information, and
wherein the data portion describes ~~the~~ a number of the second data units
contained in the successive record length.

8. (Currently Amended) The recording apparatus as set forth in claim 3,
wherein the file structure further includes a data portion that ~~describes~~ includes
management information, and
wherein the data portion describes a flag and ~~the~~ a number of sets contained in
the successive record length, the flag representing whether or not sets of encoded video
data and audio data of the second data unit have been recorded in the data portion.

9. (Currently Amended) A recording method for recording video data to a
rewritable optical disc, said method comprising the steps of:
encoding the video data ~~corresponding to~~ in accordance with a compression-

encoding process;

converting ~~the~~ a data structure of the encoded video data received at the encoding step into a file structure that allows a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware; and

recording ~~the~~ data having ~~the~~ said file structure to ~~an~~ ~~the~~ optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit;~~

wherein a plurality of ~~the~~ second data units ~~is~~ ~~are~~ matched with a successive record length ~~of which data is written to the optical disc; and~~

wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

10. (Currently Amended) A recording method for recording audio data to a rewritable optical disc, said method comprising the steps of:

encoding the audio data in accordance with a compression-encoding process;

converting ~~the~~ a data structure of audio data or encoded audio data into a file structure that allows a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware; and

recording ~~the~~ data having ~~the~~ said file structure to ~~an~~ ~~the~~ optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit;~~

wherein a plurality of ~~the~~ second data units ~~is~~ ~~are~~ matched with a successive record length ~~of which data is written to the optical disc; and~~

wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

11. (Currently Amended) A recording method for recording video data and audio data to a rewritable optical disc, said method comprising the steps of:

encoding ~~the~~ video data ~~corresponding to~~ in accordance with a compression-encoding process in a combination of an inter-frame predictive encoding process and a motion compensating process that allow a plurality of frames ~~are to be~~ structured as a group;

outputting audio data that has been ~~compression-encoded or non-compressed~~ either encoded or not encoded;

converting ~~the~~ a data structure of the encoded video data received at the encoding step and ~~the~~ a data structure of the audio data received at the outputting step into respective file structures that allow a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware; ~~and~~

multiplexing the encoded video data and the audio data; and

recording the multiplexed data to ~~an~~ the optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit~~;

wherein a plurality of ~~the~~ second data units ~~is are~~ matched with a successive record length of which data is written to the optical disc; ~~and~~

wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

12. (Currently Amended) A record medium on which a program for recording video data to a record medium has been recorded, the program causing a computer to perform the steps of:

encoding the video data ~~corresponding to~~ in accordance with a compression-encoding process;

converting ~~the~~ a data structure of the encoded video data received at the encoding step into a file structure that allows a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware; and

recording the data having ~~the said~~ file structure to ~~an the~~ optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit;~~

wherein a plurality of ~~the~~ second data units ~~is are~~ matched with a successive record length ~~of which data is written to the optical disc; and~~

wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

13. (Currently Amended) A record medium on which a program for recording audio data to a record medium has been recorded, the program causing a computer to perform the steps of:

encoding the audio data in accordance with a compression-encoding process;

converting ~~the~~ a data structure of audio data or encoded audio data into a file structure that allows a moving picture to be synchronously reproduced by computer

software without a need to use specially dedicated hardware; and

recording the data having ~~the said~~ file structure to ~~an the~~ optical disc[[,]];

wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit~~;

wherein a plurality of ~~the second data units is are~~ matched with a successive record length ~~of which data is written to the optical disc; and~~

wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

14. (Currently Amended) A record medium on which a program for recording video data and audio data to a record medium has been recorded, the program causing a computer to perform the steps of:

encoding ~~the video data corresponding to~~ in accordance with a compression-encoding process in a combination of an inter-frame predictive encoding process and a motion compensating process that allow a plurality of frames ~~are to be~~ structured as a group;

outputting audio data that has been ~~compression-encoded or non-compressed~~ either encoded or not encoded;

converting ~~the a~~ data structure of the encoded video data received at the encoding step and ~~the a~~ data structure of the audio data received at the outputting step into respective file structures that allow a moving picture to be synchronously reproduced by computer software without a need to use specially dedicated hardware; and

multiplexing the encoded video data and the audio data; and

recording the multiplexed data to an the optical disc[[,]]; wherein the file structure has a first data unit and a second data unit, the second data unit being a set of the first data ~~units, and unit;~~ wherein a plurality of the second data units ~~is are~~ matched with a successive record length ~~of which data is written to the optical disc; and~~ wherein a transfer rate of the encoding means is lower than a transfer rate of the data recorded on the optical disc when the data is intermittently read.

15. (Currently Amended) The recording apparatus as set forth in claim 3, wherein the audio data is compression-encoded ~~corresponding to ATRAC, in accordance with a Adaptive Transform Acoustic Coding method (ATRAC); and~~ wherein the first data unit of the file structure contains one or ~~a plurality of more~~ sound units.

16. (Currently Amended) The recording apparatus as set forth in claim 2, wherein the file structure further includes a data portion that ~~describes includes~~ management information, and wherein the data portion describes ~~the~~ a number of the second data units contained in the successive record length.